Advanced Training Technologies/E-Learning Panel

A panel on Advanced Training Technologies was included as part of the emerging issues discussion on Friday. Understanding how to best utilize and integrate technology into worker training programs is a relevant issue for all WETP awardees and will continue to increase in importance as technologies improve and on-line training becomes more prevalent.

In particular, the efficacy of advanced training technologies continues to generate heated discussion among the awardee community. Panel members Paul Morse (TNEC), Michael Glassic (Y-Stress), and Don Ellenberger (CPWR) discussed the process and challenges of integrating ATT into their own core training programs.

Paul Morse opened the panel with a few questions to provide a framework for discussion:

- How do awardees compare the training that they do using ATT with the traditional training that they have done?
- Are awardees melding hands-on training and technology to the greatest extent?
- How has the training been beneficial?
- As training technologies continues to advance in quality, is ATT threatening our training?

Mike Glassic: George Meany Online Training Course

Mike Glassic presented a segment from an on-line First responder awareness level course, designed for the George Meany Center for Labor Studies (GMCLS). The ultimate objective for this course was to take first generation e-learning (HTML) and apply streaming technologies to make it more exciting to the user. In addition, the course was developed such that course material and learning objects could be delivered over low bandwidth, making it as accessible as possible to those with varying bandwidth capabilities. Finally, the aim was to enable the final product to fit into any web portal that used learner centric approach, placing the learner at the center of knowledge.

A good test for any instructor or course designer is to ask if the course can stand alone. You should be able to pull learning objects from the material such that courses can be tailored to match the needs of the individual.

There were several important design/technology elements incorporated as part of the course design process that were essential to meeting the objectives mentioned above, including:

1. Reusable learning object (RLO) files were used and placed in a repository, so they had to be small.
2. Graphics, animation, audio, and questions were combined to create a rich experience of the user.
3. Graphics were used sparingly.

4. Coding language in Flash was used to get images to move without having to download the image.
5. Students were given the option to download audio external files, thereby reducing the necessary use of bandwidth.

A few statistics on technology use in both the home and the workplace helps to place the need for WETP training programs to incorporate advanced training technologies in context. 75 percent of workplaces and 40 percent of homes are connected by broadband. 50 percent of homes are connected by 56Kmodems. This particular training program was designed for a 28K modem. 62 percent of the course material is 8K in size or less, and 62 percent of the objects will download in 1.8 seconds or less on a 56 K modem. The average time to download Unit 1 resources for the course is 10 seconds.

Evaluation data for this online awareness course has shown an 80 percent course completion rate. The average increase in pre- and post-test scores was 30 percent.

Don Ellenberger: CPWR DVD-based Training

Don Ellenberger, training director for the Center to Protect Workers' Rights, presented clips from a DVD-based training component that is part of the organization's Hazardous Waste refresher internet-based curriculum. A one-page lesson plan and references to the DVD can be found at CPWR's Hazardous Waste Refresher internet-based curriculum website at http://www.cpwr.com/protected, under Emergency Response.

A key message advocated by Mr. Ellenberger was that of the value of the training tools offered by an organization or employer to its students and/or workers: the better tools you can get from your employer, the better job you can do. The DVD is one training tool currently employed by CPWR to train its workers.

Mr. Ellenberger demonstrated a clip from a sheet metal safety training DVD that employs a virtual training tool. It contains slides, worker interviews, and simulations to convey key safety procedures and messages to the end user.

Should any awardee wish to obtain a copy of the CPWR DVD-based Emergency Response training component, you may contact him at dellenberger@cpwr.

Question and Answer Period

One audience member posed the question of how to introduce these new, advanced training tools to trainers who are not familiar with the technology, and help warm them to utilizing it in the classroom. A suggestion was made that a key message to convey to these trainers is that this technology is not intended as a replacement to traditional training methods. The theory that computers will replace trainers is simply not true. Blended learning, which employs a mix of both traditional classroom and online learning, has been proven to be more effective than online learning by itself.

It was also noted that reactions to demonstrations tended to attract people to the technology rather than push them away. Try not to sell instructors short, as they may be more interested in using these new technologies than one realizes. They will like new tools that can improve their training.

A representative from TNEC shared that their experience with trainers who were initially fearful of a new technology training tool was that this trepidation faded once they had an opportunity to work with the new tool and learn that its operation was not at all as difficult as perceived at the outset.

Finally, Don Ellenberger reminded participants to remember that you don't necessarily need a computer to do DVD-training. You can put it into your DVD machine and use it just as well. Also, it is important to consider that training technologies can be used as a complementary tool as PART of the course, not all of it.